Secc
Oil & Gas Ltd

2” 15K psi Mid Line Weak Link

Technical Data Sheet

CYGNET GROUP
COMPANY

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DESIGN BASICS			
Coupling Type	15K psi MLWL Connector (nominally dual valved, can be supplied with single valve or unvalved)		
Coupling Size	47.0mm		
Pressure Rating	1034 Bar (15K psi)	**Test Pressure**	1551 Bar (22.5K psi)
Max Operating Depth	3050m (10,000ft)	**Operating Temperature**	0.0°C to +60.0°C
Flow Path	Full bore (with 4 x 45° bends)		
Design Code	API 6A 17D PSL3 PR2 for Other End Connectors (OEC) – PSL3G available on request		
Material Classification	API material class FF, HH available in accordance with NACE MR0175		
Certification Level	EN 10204 3.1		
Operational	Passive disconnect under pressure with minimal leakage – Can be supplied with active disconnect capability		
Breakout Load	1 – 5 Tonne (other options could be made available)		
Mounting	Vertical or horizontal		
Installation	Typically mounted between 2 flexible fluid conduits in order to create a mid-line weak link		
End Constraint	Floated tension pin mechanism		
Fluid Loss On Break	≈ 4 litres		
Design Life	25 years (metallic components)		
Additional Options	Swivel options available at either end of connector. Various deployment/locking/tethering options available. Protection jacket.		
PERFORMANCE			
Max. Bending Moment	7500 Nm	**Maximum Torque**	3497.5 Nm
BASIC WEIGHT AND DIMENSIONS			
Connected dimensions	1150mm (L) x 338mm (H) x 220mm (W)	**Disconnected dimensions**	1450mm (L) x 338mm (H) x 220mm (W)
Weight in air	151kg		
CONNECTION DETAILS			
Inlet Connection	Grayloc B20 Hub (other end connections available)		
Outlet Connection	Grayloc B20 Hub (other end connections available)		
MATERIALS			
Body	Super Duplex 32760		
Probes	Inconel 6A718	**Elastomeric Seals**	HNBR (FKM or FFKM available)
Sleeves	Super Duplex 32760	**Bolting (Studs)**	A4 Stainless Steel
Non Pressure Bearing	Stainless Steel 316	**Bolting (Nuts)**	A4 Stainless Steel
TESTING REQUIREMENTS			
Pressure Test	API 6A PSL3	**Impact Testing**	ASTM A370
Qualification Test	API 6A PR2 (OEC)	**Hardness Testing**	ASTME10 / ASTME18
Ultrasonic	API 6A PSL3	**Magnetic Particle**	API 6A PSL 3
Dye Penetrant	API 6A PSL3	**Radiography**	As Required (weld)
Corrosion Testing	ASTM G48 Method A		
WITNESS REQUIREMENTS			
Customer Witness	Available	**Third Party Witness**	Available at additional cost
PAINTING REQUIREMENTS			
Painting Specification	None	**Colour**	N/A
NOTES / ADDITIONAL REQUIREMENTS			

These figures are based on known and estimated data. Secc reserves the right to change specifications without notice.

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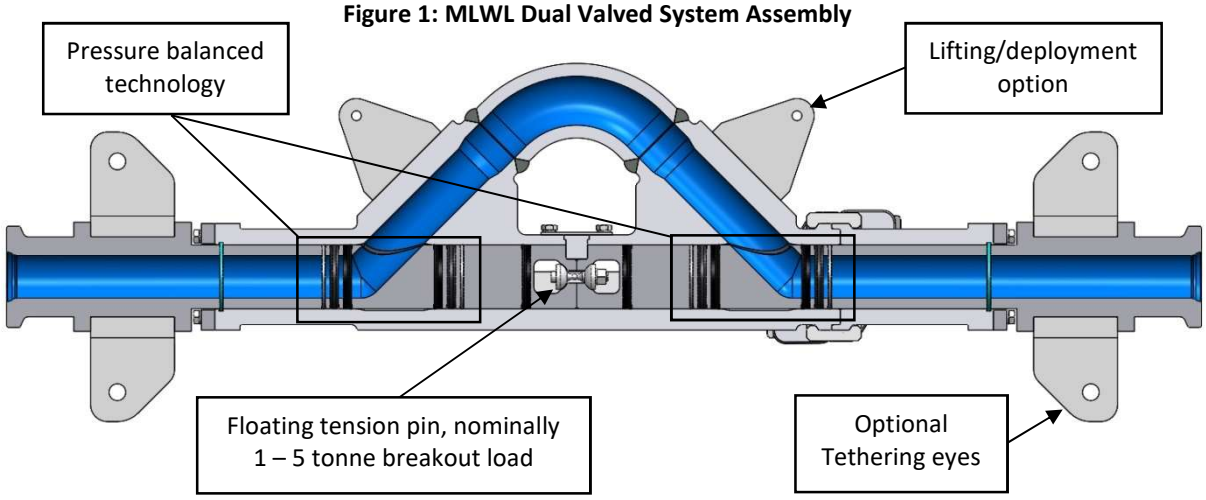
The Mid Line Weak Link is a full-bore, pressure-balanced connector, positioned midway along the fluid conduit. It is designed to break away in an emergency, automatically sealing the bore. This system prevents fluid loss to the marine environment. It also protects personnel and equipment from an uncontrolled disconnect and the impact of dangerous loads.

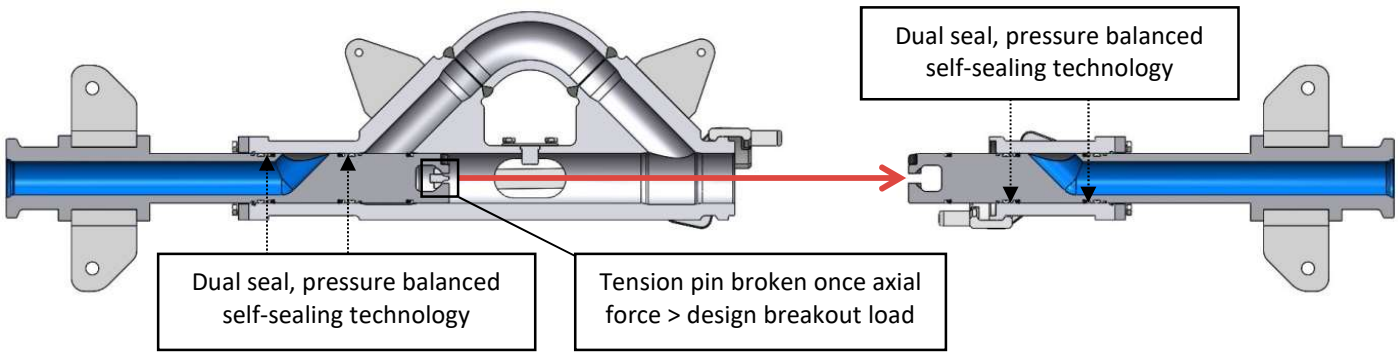
Figure 1: MLWL Dual Valved System Assembly



Secc's MLWL employs a floated tension pin mounted outside of the flow path. Floating the tension pin protects it from bending and torsional loads generated during operation. Being outside of the flow path protects the pin from forces generated from flow or pressure fluctuations.

The MLWL emergency quick disconnect is designed to break only when an external axial pull is applied. The tension pin can be accurately matched to a desired break load. The fatigue free design eliminates uncontrolled actuation and premature disconnection.

Figure 2: Disconnected MLWL System



Secc's new protection jacket offers complete safeguarding of the connector during installation, operation and recovery; whilst also allowing for unrestricted access to end-connections, lifting points, and inspection of the tension pin mechanism without removal.